

Appl. No. 10/711,036  
Amdt. dated June 07, 2005  
Reply to Office action of March 11, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

5 **Listing of Claims:**

Claim 1 (currently amended): A substrate isolation design, comprising:

a P substrate;

a P well positioned on the substrate;

at least a device positioned in the P well; and

10 at least a P substrate guard ring surrounding the device, wherein an N well guard ring is positioned between the device and the P substrate guard ring.

15 Claim 2 (original): The substrate isolation design of claim 1, wherein the P substrate guard ring is positioned beneath a shallow isolation trench formed within the P well.

Claim 3 (original): The substrate isolation design of claim 1, further comprising at least a P+ guard ring surrounding the device.

20 Claim 4 (original): The substrate isolation design of claim 3, wherein the P+ guard ring is between the device and the P substrate guard ring.

25 Claim 5 (original): The substrate isolation design of claim 4, further comprising at least [an] the N well guard ring between the P+ guard ring and the P substrate guard ring.

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Claim 6 (original): The substrate isolation design of claim 5, further comprising at least a deep N well guard ring positioned beneath the P well to contact to the N well guard ring.

- 5 Claim 7 (original): The substrate isolation design of claim 1, further comprising an N well guard ring surrounding the device.

Claim 8 (original): The substrate isolation design of claim 7, wherein the N well guard ring is between the device and the P substrate guard ring.

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Claim 9 (original): The substrate isolation design of claim 8, further comprising at least a deep N well guard ring positioned beneath the P well to contact to the N well guard ring.

- 15 Claim 10 (currently amended): A substrate isolation design, comprising:  
a substrate;  
at least a device positioned on the substrate;  
a first guard ring surrounding the device;  
a second guard ring surrounding the first guard ring; and  
20 a third guard ring surrounding the second guard ring, the third  
guard ring being a substrate guard ring, wherein the second  
guard ring comprises an N well guard ring.

- 25 Claim 11 (original): The substrate isolation design of claim 10, wherein the first guard ring comprises a P+ guard ring.

Claim 12 (cancelled)

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Claim 13 (original): The substrate isolation design of claim 10, wherein the third guard ring comprises a P substrate guard ring.

Claim 14 (original): The substrate isolation design of claim 10, wherein the  
5 substrate guard ring is positioned beneath a shallow isolation trench.

Claim 15 (original): The substrate isolation design of claim 10, further comprising at least a deep N well guard ring connecting to the N well guard ring.

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Claim 16 (currently amended): A substrate isolation design, comprising:

a P substrate;

at least a device positioned in the substrate; and

at least a P substrate guard ring surrounding the device, wherein an  
15 N well guard ring is positioned between the device and the P  
substrate guard ring.

Claim 17 (original): The substrate isolation design of claim 16, further comprising at least a shallow isolation trench surrounding the device, and  
20 wherein the P substrate guard ring is positioned beneath the shallow isolation trench.

Claim 18 (original): The substrate isolation design of claim 16, further comprising at least a P+ guard ring positioned between the device and the P  
25 substrate guard ring.

Claim 19 (original): The substrate isolation design of claim 18, further

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comprising at least an N well guard ring between the P+ guard ring and the P substrate guard ring.

5 Claim 20 (original): The substrate isolation design of claim 19, further comprising at least a deep N well guard ring contacting to the N well guard ring.

Claim 21 (cancelled)

10 Claim 22 (original): The substrate isolation design of claim 21, further comprising at least a deep N well guard ring contacting to the N well guard ring.